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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,771	04/04/2001	Karl J. Urquhart	016499-706	1436

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EXAMINER

CINTINS, IVARS C

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,771

Applicant(s)

URQUHART ET AL.

Examiner

Ivars C. Cintins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-19,23-46,50 and 52 is/are pending in the application.
- 4a) Of the above claim(s) 15-18 and 34-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-14,19,23-33,46,50 and 52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-14, 19, 23-33, 46, 50 and 52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The term "the apparatus" (claim 1, line 10; claim 50, line 11) lacks antecedent basis in the claims, and is therefore indefinite. Claims 3-14, 19, 23-33, 46 and 52 depend from claim 1, and are therefore also indefinite. Claims 1, 3-14, 19, 23-33, 46, 50 and 52 are further indefinite because the structural interrelationship between the recited purification cartridge and the recited semiconductor manufacturing facility has not been clearly set forth.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-14, 19, 23-33, 46, 50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davison et al. (U.S. Patent No. 4,952,386) in view of Wang et al. (U.S. Patent No. 6,818,119). Davison et al. discloses a purification column 20, which column contains only anion exchange resin of the type recited (see col. 7, line 11; and col. 8, lines 15 and 28-38), and further teaches utilizing this purification column in a semiconductor manufacturing facility (see col. 1, lines 13-14). Accordingly, this primary reference discloses the claimed invention with the exception of the recited cartridge, its dimensions, the recited screening material, and the use of a plurality of cartridges (claim 19). Wang et al. discloses an anion exchange resin cartridge having

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a length to inside diameter ratio within the recited range, and teaches providing screening material for the resin inside the cartridge (see col. 9, lines 24-29). This secondary reference further discloses that this anion exchange resin cartridge can be used to purify a fluid in a semiconductor manufacturing facility (see col. 2, lines 15-18 and 46-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to enclose the anion exchange resin of the primary reference in the cartridge disclosed by the secondary reference, in order to facilitate handling of the anion exchange resin in this primary reference system. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a cartridge having the recited dimensions in the system of the thus modified primary reference, in order to ensure that this cartridge is capable of containing an effective amount of treatment material. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the cartridge of the modified primary reference from a perfluoroalkoxy polymer (PFA), as required by claims 10 and 31, since this material is both lightweight and durable. Moreover, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a plurality of cartridges in the modified primary reference system, in order to increase its treatment capacity. With respect to claims 3, 23, 24 and 46, Applicant should note that the intended use of a device (i.e. to purify hydrogen peroxide) is not a structural limitation, and hence cannot be relied upon to patentably distinguish apparatus claims. It is well settled that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). As for claim 52, Applicant should again note that this claim merely modifies the type of

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polyacrylic resin employed, if the polyacrylic-DVB resin is selected, but does not limit this claim to the use of a polyacrylic resin, since parent claim 1 recites that either polystyrene-DVB or polyacrylic-DVB resin may be employed in the recited cartridge.

Applicant is advised that should claim 1 be found allowable, then claim 50 will be objected to under 37 CFR § 1.75 as being a substantial duplicate thereof, since the purification material recited in claim 1 is also a resin. See M.P.E.P. § 706.03(k).

Valakovic et al. (U.S. Patent No. 6,395,183) discloses a similar anion exchange resin cartridge (see col. 7, lines 39-40 and 49-58).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is 571-272-1155. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Duane Smith, can be reached at 571-272-1166.

The centralized facsimile number for the USPTO is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ivars C. Cintins
Primary Examiner
Art Unit 1724

I. Cintins
September 24, 2005